

WE CLAIM:

1 *Sub A* 1. A sandwich panel, comprising:

2 a first face panel having a first predetermined thickness and being formed of a fiber-
3 reinforced cementitious material;

4 a second face panel having a second predetermined thickness and being formed of a fiber-
5 reinforced cementitious material;

6 a support frame for supporting the first and second face panels in a spaced apart
7 configuration, the support frame being formed of a fiber-reinforced cementitious material that is
8 continuous with the cementitious material of the first and second face panels; and

9 an insulation material embedded in the sandwich panel that defines a structure of the
10 support frame.

11 2. A sandwich panel as defined in claim 1, wherein the first predetermined thickness is
12 between about 0.375 inches and 1.0 inches and the second predetermined thickness is between
13 about 0.375 inches and 1.0 inches.

14 3. A sandwich panel as defined in claim 2, wherein the sandwich panel has a height
15 greater than 6 feet, a width greater than about 8 feet, and a thickness between about 3.5 and 5
16 inches.

17 4. A sandwich panel as defined in claim 1, wherein the support frame comprises an upper
18 border beam, a lower border beam, and first and second border beams that encompass the
19 insulation material.

20 5. A sandwich panel as defined in claim 4, wherein the support frame comprises one or
21 more ribs having a length extending between the lower border beam and the upper border beam,
22 and being substantially parallel with the first and second end beams, and coupling the first and
23 second face panels along the length of the ribs.

1 6. A sandwich panel as defined in claim 5, wherein the sandwich panel has a thickness
2 between about 4.5 inches, the beams each have a width of about 4 inches, and the ribs each have
3 a width of about 2.5 inches.

1 7. A sandwich panel as defined in claim 4, wherein each border beam is strengthened by
2 a reinforcing bar.

1 8. A sandwich panel as defined in claim 4, wherein the sandwich panel includes an
2 opening formed by first and second jamb beams extending between the lower border beam and
3 the upper border beam, and being substantially parallel with the first and second end beams, by a
4 sill beam extending between the first and second jamb beams and being substantially parallel
5 with the lower and upper border beams, and by a header beam extending between the first and
6 jamb beams and being substantially parallel with the lower and upper border beams.

1 9. A sandwich panel as defined in claim 8, wherein each beam is strengthened by a
2 reinforcing bar.

1 10. A sandwich panel as defined in claim 1, wherein the insulation material comprises at
2 least one rigid block of insulation.

1 11. A sandwich panel as defined in claim 1, wherein the cementitious material has a
2 composition, by weight before cure, of about 42.3% cement, about 42.3% sand, about 1.0%
3 polypropylene fiber, about 0.1% superplasticiser and about 14.3% water.